REMARKS

In the Office Action mailed July 19, 2006, claims 1-20 are currently pending. Claims 1-3 and 11-13 stand rejected on the ground of non-statutory double patenting over claims 1-16 of U.S. Patent No. 6,463,475. Included with this Response, Applicants provide a Terminal Disclaimer. Applicants therefore respectively request that this rejection be withdrawn.

Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102 (e) as being allegedly anticipated by Chuah et al. (US Patent No. 6,449,272) ("Chuah '272").

Claims 4-10 and 14-20 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Chuah et al (US Patent No. 6,449,272) in view of Adelman et al. (US Patent No. 6,006,259) ("Adelman '259").

Applicants respectively traverse. After a careful review of the Office Action and the cited references, Applicants respectively request reconsideration in view of the following remarks.

I.   CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(e) as being allegedly anticipated by Chuah et al. (US Patent No. 6,449,272). Applicants respectively traverse.

A.   Independent Claim 1

With respect to Applicants' presently claimed invention of claim 1, claim 1 is expressly directed to a tunnel endpoint device that includes a "means for transmitting the SCCRP message to **a network address translation server** via the network interface." As Applicants explain, a network address translation (NAT) server 160 acts as a gateway for packets on LAN 156 that are addressed to destinations on IP network 70. NAT server 160 may advertise the addresses to which it can route packets over LAN 156 to the devices attached to LAN 156.

When NAT server 160 receives SCCRP message 106, it uses the message to create a table entry, as shown in Table 1 below. The table entry contains the local address for tunnel endpoint device 170C combined with a channel or port identifier, as assigned to the tunnel connection by tunnel endpoint 170C, along with the global IP address of tunnel initiator 40 combined with a channel or port identifier, as assigned by tunnel initiator 40 combined with a channel or port identifier, as assigned by tunnel initiator 40. In the present example, the channel/port identifier at each end is the UDP port assigned by the device. Other protocols will employ other types of identifiers, such as a Virtual Channel Identifier (VCI) or a Virtual Path Identifier (VPI) for an Asynchronous Transfer Mode (ATM) network. Thus, the table entry creates a correspondence between the physical devices and local connections at each end of the tunnel connection. NAT server 160 then substitutes its own global IP address for the local IP address of tunnel endpoint device 170C in the source address field of the SCCRP message (source=NAT) and forwards the modified SCCRP message 108 to tunnel initiator 40.

FAR END IP ADDRESS	FAR END CHANNEL/PORT	LOCAL END NET ADDRESS	LOCAL END CHANNEL/PORT
Global address for Tunnel initiator 40.	(UDP port assigned by tunnel initiator 40).	Local address for tunnel endpoint 170C.	(UDP port assigned by tunnel endpoint 170C).

(Applicants' Specification, p. 11 line 19 – p. 12 line 14).

The present Office Action states that Chuah '272 discloses "means for transmitting the SCCRP message to a network address translation server (i.e. router) via the network interface. [Chuah, SCCRP, router col 7 lines 5-25; Fig 1-2, 5-15]." July 19, 2006 Office Action p. 5. Applicants respectively traverse.

The cited portions of Chuah '272 do not disclose a "network address translation server" as presently claimed in Applicants' currently pending claim 1. These cited portions of Chuah

'272 do not discuss a router at all, let alone a "means for transmitting the SCCRP message to a network address translation server via the network interface." As such, the cited portions of Chuah '272 do not discuss any type of router having a means for translating a network address. Rather, the cited portions of Chuah '272 appear to merely discuss how a number of control message transactions occur. Chuah '272 Col. 7, Lines 5-24. In the cited text of Chuah '272, there is simply no mention of a router.

Moreover, the Figures of Chuah '272 relied upon in the Office Action also fail for a similar reason (i.e., Figures 1-2 and 5-15). July 19, 2006 Office Action p. 5. For example, Figure 1 and Figure 8 illustrate routers 125 and 165. Figures 1 and 8 fail, however, to illustrate how these routers 125, 165 may be used to translate network addresses. The remaining cited figures, Figures 2, 5-7 and 9-15, simply fail to refer to any router, let alone routers 125 and 165.

To anticipate a claim, "each and every element set forth in the claim [must be] found, either expressly or inherently described, in a single . . . reference." *Vergall Bros. V. Union Oil Co. of California*, 814 F.2f 628, 631 (Fed. Cir. 1987) (M.P.E.P. Section 2131). Consequently, since Chuah '272 does not teach or suggest "a network address translation server," Chuah '272 simply also does not teach or suggest "a means for transmitting the SCCRP message to a network address translation server via the network interface." Chuah '272 therefore does not to teach every element of the claimed invention and, therefore does not anticipate Applicant's presently pending independent claim 1.

C.   Independent Claims 4 and 14

Applicants submit that the combination of the Chuah '272 and Adelman 259 do not teach all elements of each of claims 4 and 14 in as complete detail as contained in these claims. For

example, with respect to Applicants' presently claimed invention of claim 4, claim 4 is expressly directed to **a cluster master device**. This cluster master device expressly includes

"a first interface coupled to a first network having a plurality of network devices" and further includes "a second interface for communicating with a second network." The "cluster master device" further includes "a master global address that is unique on the second network" and that "for each tunnel connection request received, **select** one of the plurality of network devices, "insert a local address for the selected network device into the destination address field of the received tunnel connection request message," and "transmit the received tunnel connection request message as modified over the first network onto the first network." Independent claim 14 recites similar limitations.

As more fully explained in Applicants' Specification, in one arrangement, a cluster master 154 receives SCCRQ message 102 and determines which tunnel endpoint device 170A, 170B and 170C should receive the message. A variety of load-sharing approaches exist for tunnel endpoint device assignment, such as round-robin or leaky bucket. A preferred approach is for the cluster master 154 to receive load status messages from each tunnel endpoint device 170A, 170B and 170C and assign the SCCRQ message 102 to the device that currently has the lowest load and indicated by the load status messages. (Specification p. 10 lines 17-22) (emphasis added). Indeed, dependent claims 5 and 6 further clarify that the master network device may be configured to select one of the plurality of network devices based upon "a traffic load" of the network devices. (Specification p. 19, lines 9-11).

Chuah '272 neither discloses nor teaches such a "master network device," let alone "a master network device...having a master global address that is unique on the second network and . . . for each tunnel connection request received, **select** one of the plurality of network devices,

insert the local address for the selected network device into the destination field of the received tunnel connection request message, and forward the received tunnel connection request message as modified."

It appears that the Office Action equates Applicants' presently claimed "master network device" with "a router." (July 19, 2006 Office Action at p. 6) However, the cited portions of Chuah '272 at column 3, lines 22-35, column 5, lines 45-63; column 7, lines 5-25, and column 9, lines 10-32 that mention or discuss a "router" do not mention or suggest Applicants' "master network device" as discussed above. Rather, the cited portions of Chuah '272 merely discuss a number of control message transactions that occur in order to set up a PP session.

The present Office Action concedes that Chuah '272 "does not explicitly detail the cluster device or router as a cluster master device" but contends that "Adelman discloses a IP network clustering system wherein a master unit in the cluster providing a filter mechanism, using L2TP and tunnel ID [Adelman, col 3 lines 10-30; col 10 lines 30-35]." July 19, 2006 Office Action p. 6. Applicants respectively traverse.

Adelman 259 is merely directed to an Internet Protocol (IP) network that utilizes a "filtering mechanism" in each cluster. This filtering mechanism uses a "highly efficient hashing mechanism to generate an index number for each message session." Adelman 259 Col. 3, Lines 20-24.

To establish a *prima facie* case of obviousness, the cited references must teach or suggest all the claim limitations. (MPEP § 2142). For at least these reasons, neither neither Chuah '272 nor Adelman '259, teach or suggest (either alone or in combination) Applicants' pending Claims 4, and 14.

D. Independent Claim 11

With respect to Applicants' presently claimed invention of claim 11, claim 11 is expressly directed to "a method of terminating tunnel connections." The present Office Action states "Claims 11-13 contain similar limitations set forth in claims 1-3. Therefore claims 11-13 are rejected for the same rationale set forth in claims 1-3." July 19, 2006 Office Action p. 5. Applicants traverse.

Applicants respective suggest that claim 11 does not "contain similar limitations" as currently pending claim 1. Rather, the following exemplary limitations of claim 11 are not found in claim 1:

- terminating a tunnel connection;

- a tunnel connection request message;

- a load status message from each tunnel endpoint device;

- selecting a tunnel endpoint device to receive the tunnel connection request message; and

- assigning the tunnel connection request message to the selected tunnel endpoint device.

Since the claim scope of claim 11 is different than the claim scope of claim 1, Applicants respectively request that the present rejection be withdrawn.

IV.   SUMMARY

Applicants respectfully submit that, in view of the remarks above, the present application, including claims 1-20, are in condition for allowance and solicit action to that end. Independent claims 1, 4, 11, and 14 are in condition for allowance for at least the reasons discussed above.

Dependent claims all depend from either independent claim 1, 4, 11, or 14 and are therefore allowable for at least the reasons set forth above.

If there are any matters that may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicants' undersigned representative at (312) 913-0001.

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff LLP

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Thomas E. Wettermann
Reg. No. 41,523